FILE 'HOME' ENTERED AT 09:04:23 ON 26 OCT 2004

=> biosis medline caplus wpids uspatfull BIOSIS IS NOT A RECOGNIZED COMMAND The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> file biosis medline caplus wpids uspatfull COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION 0.42 0.42

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FILE 'MEDLINE' ENTERED AT 09:05:26 ON 26 OCT 2004

FILE 'CAPLUS' ENTERED AT 09:05:26 ON 26 OCT 2004 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE 'USPATFULL' ENTERED AT 09:05:26 ON 26 OCT 2004 CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

*** YOU HAVE NEW MAIL ***

FULL ESTIMATED COST

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154 DETECT? (10A) RATIO? (10A) NUCLEIC ACID? L1

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28 L1 AND ELECTRO? (4A) LABEL? L3

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=> d 15 bib abs 1-9

L5 ANSWER 1 OF 9 USPATFULL on STN

AN2004:13092 USPATFULL

Methods and apparati using single polymer analysis TIIN

Zhao, Xiaojian, Westford, MA, UNITED STATES Randall, Jeffrey D., Canton, MA, UNITED STATES Kundu, Bijit, Brookline, MA, UNITED STATES Kesty, Jessica, Seabrook, NH, UNITED STATES Gullans, Steve R., Natick, MA, UNITED STATES Chan, Eugene Y., Brookline, MA, UNITED STATES Fuchs, Martin, Uxbridge, MA, UNITED STATES

20040115 US 2004009612 \mathbf{PI} A1 20030528 (10) ΑI US 2003-448264 A1

```
PRAI
       US 2002-383968P
                           20020528 (60)
       US 2003-437892P
                           20030103 (60)
       US 2003-441334P
                           20030120 (60)
       US 2003-441337P
                           20030121 (60)
       Utility
DT
FS
       APPLICATION
       Maria A. Trevisan, Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue,
LREP
       Boston, MA, 02210
       Number of Claims: 136
CLMN
       Exemplary Claim: 1
ECL
       39 Drawing Page(s)
DRWN
LN.CNT 3179
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The invention relates to methods for analyzing and characterizing single
AB
       polymers such as nucleic acid molecules. In preferred embodiments, the
       single molecules are analyzed using single molecule detection and
       analysis systems.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 2 OF 9 USPATFULL on STN
L5
AΝ
       2003:265281 USPATFULL
      Expression monitoring by hybridization to high density oligonucleotide
TI
       Fodor, Stephen P.A., Palo Alto, CA, UNITED STATES
IN
       Solas, Dennis W., San Francisco, CA, UNITED STATES
       Dower, William J., Menlo Park, CA, UNITED STATES
       AFFYMETRIX, INC. (U.S. corporation)
PA
ΡI
       US 2003186296
                          A1
                               20031002
AΙ
       US 2003-367708
                          A1
                               20030219 (10)
       Division of Ser. No. US 2001-851312, filed on 9 May 2001, GRANTED, Pat.
RLI
       No. US 6551784 Continuation-in-part of Ser. No. US 1995-529115, filed on
       15 Sep 1995, GRANTED, Pat. No. US 6040138 Continuation-in-part of Ser.
       No. US 1996-670118, filed on 25 Jun 1996, GRANTED, Pat. No. US 5800992
       Division of Ser. No. US 1993-168904, filed on 15 Dec 1993, ABANDONED
       Continuation of Ser. No. US 1990-624114, filed on 6 Dec 1990, ABANDONED
       Continuation-in-part of Ser. No. US 1989-362901, filed on 7 Jun 1989,
       ABANDONED
PRAI
       WO 1996-US14839
                           19960913
       Utility
DT
FS
       APPLICATION
       MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE, N.W., WASHINGTON,
LREP
       DC, 20004
       Number of Claims: 22
CLMN
       Exemplary Claim: 1
\mathsf{ECL}
DRWN
       12 Drawing Page(s)
LN.CNT 7067
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention provides methods for comparing and identifying
AB
       differences in nucleic acid sequences using a plurality of sequence
       specific recognition reagents (i.e., probes comprising a nucleic acid
       complementary to a nucleic acid sequence in collections to be compared)
       bound to a solid surface.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L5
     ANSWER 3 OF 9 USPATFULL on STN
       2003:258639 USPATFULL
AN
TI
       207 human secreted proteins
```

Ni, Jian, Germantown, MD, UNITED STATES

Ebner, Reinhard, Gaithersburg, MD, UNITED STATES LaFleur, David W., Washington, DC, UNITED STATES

Olsen, Henrik S., Gaithersburg, MD, UNITED STATES

Moore, Paul A., Germantown, MD, UNITED STATES

IN

```
Rosen, Craig A., Laytonsville, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
Soppet, Daniel R., Centreville, VA, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Shi, Yanggu, Gaithersburg, MD, UNITED STATES
Florence, Kimberly A., Rockville, MD, UNITED STATES
Wei, Ying-Fei, Berkeley, CA, UNITED STATES
Florence, Charles, Rockville, MD, UNITED STATES
Hu, Jing-Shan, Mountain View, CA, UNITED STATES
Li, Yi, Sunnyvale, CA, UNITED STATES
Kyaw, Hla, Frederick, MD, UNITED STATES
Fischer, Carrie L., Burke, VA, UNITED STATES
Ferrie, Ann M., Painted Post, NY, UNITED STATES
Fan, Ping, Potomac, MD, UNITED STATES
Feng, Ping, Gaithersburg, MD, UNITED STATES
Endress, Gregory A., Florence, MA, UNITED STATES
Dillon, Patrick J., Carlsbad, CA, UNITED STATES
Carter, Kenneth C., North Potomac, MD, UNITED STATES
Brewer, Laurie A., St. Paul, MN, UNITED STATES
Yu, Guo-Liang, Berkeley, CA, UNITED STATES
Zeng, Zhizhen, Lansdale, PA, UNITED STATES
Greene, John M., Gaithersburg, MD, UNITED STATES
                         20030925
US 2003181692
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                         20010822 (9)
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Continuation-in-part of Ser. No. WO 2001-US5614, filed on 21 Feb 2001,
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1998, PENDING
                     20000224 (60)
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PI

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RLI

PRAI

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19970606 (60)
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                            19970905 (60)
       US 1997-57634P
       US 1997-70923P
                            19971218 (60)
       US 1998-92921P
                            19980715 (60)
       US 1998-94657P
                            19980730 (60)
                            19971218 (60)
       US 1997-70923P
                            19980715 (60)
       US 1998-92921P
       US 1998-94657P
                            19980730 (60)
       Utility
       APPLICATION
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
       Number of Claims: 23
       Exemplary Claim: 1
       10 Drawing Page(s)
LN.CNT 32746
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to novel human secreted proteins and
       isolated nucleic acids containing the coding regions of the genes
       encoding such proteins. Also provided are vectors, host cells,
       antibodies, and recombinant methods for producing human secreted
       proteins. The invention further relates to diagnostic and therapeutic
       methods useful for diagnosing and treating diseases, disorders, and/or
       conditions related to these novel human secreted proteins.
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CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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ANSWER 4 OF 9 USPATFULL on STN
L5
```

2003:237907 USPATFULL AN

DT

FS

LREP

CLMN

 ECL

DRWN

AB

Compositions and methods for the therapy and diagnosis of colon cancer ΤI

```
King, Gordon E., Shoreline, WA, UNITED STATES
       Meagher, Madeleine Joy, Seattle, WA, UNITED STATES
       Xu, Jiangchun, Bellevue, WA, UNITED STATES
       Secrist, Heather, Seattle, WA, UNITED STATES
       Jiang, Yuqiu, Kent, WA, UNITED STATES
       Corixa Corporation, Seattle, WA, UNITED STATES, 98104 (U.S. corporation)
PA
       US 2003166064
PI
                          A1
                                20030904
AI
       US 2002-99926
                          A1
                                20020314 (10)
       Continuation-in-part of Ser. No. US 2001-33528, filed on 26 Dec 2001,
RLI
       PENDING Continuation-in-part of Ser. No. US 2001-920300, filed on 31 Jul
       2001, PENDING
       US 2001-302051P
PRAI
                           20010629 (60)
       US 2001-279763P
                           20010328 (60)
       US 2000-223283P
                           20000803 (60)
       Utility
DT
FS
       APPLICATION
       SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300,
LREP
       SEATTLE, WA, 98104-7092
       Number of Claims: 17
CLMN
       Exemplary Claim: 1
ECL
       No Drawings
DRWN
LN.CNT 8531
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Compositions and methods for the therapy and diagnosis of cancer,
AB
       particularly colon cancer, are disclosed. Illustrative compositions
       comprise one or more colon tumor polypeptides, immunogenic portions
       thereof, polynucleotides that encode such polypeptides, antigen
       presenting cell that expresses such polypeptides, and T cells that are
       specific for cells expressing such polypeptides. The disclosed
       compositions are useful, for example, in the diagnosis, prevention
       and/or treatment of diseases, particularly colon cancer.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L5
     ANSWER 5 OF 9 USPATFULL on STN
AN
       2003:106233 USPATFULL
       Compositions and methods for the therapy and diagnosis of pancreatic
TI
       cancer
       Benson, Darin R., Seattle, WA, UNITED STATES
IN
       Kalos, Michael D., Seattle, WA, UNITED STATES
       Lodes, Michael J., Seattle, WA, UNITED STATES
       Persing, David H., Redmond, WA, UNITED STATES
       Hepler, William T., Seattle, WA, UNITED STATES
       Jiang, Yuqiu, Kent, WA, UNITED STATES
       Corixa Corporation, Seattle, WA, UNITED STATES, 98104 (U.S. corporation)
PA
\mathtt{PI}
                               20030417
       US 2003073144
                          A1
AI
       US 2002-60036
                                20020130 (10)
                          A1
PRAI
       US 2001-333626P
                           20011127 (60)
       US 2001-305484P
                           20010712 (60)
       US 2001-265305P
                           20010130 (60)
       US 2001-267568P
                           20010209 (60)
       US 2001-313999P
                           20010820 (60)
       US 2001-291631P
                           20010516 (60)
       US 2001-287112P
                           20010428 (60)
                           20010321 (60)
       US 2001-278651P
       US 2001-265682P
                           20010131 (60)
       Utility
DT
FS
       APPLICATION
LREP
       SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300,
       SEATTLE, WA, 98104-7092
       Number of Claims: 17
CLMN
       Exemplary Claim: 1
ECL
DRWN
       No Drawings
LN.CNT 14253
```

IN

CAS INDEXING IS AVAILABLE FOR THIS PATENT. Compositions and methods for the therapy and diagnosis of cancer, AB particularly pancreatic cancer, are disclosed. Illustrative compositions comprise one or more pancreatic tumor polypeptides, immunogenic portions thereof, polynucleotides that encode such polypeptides, antigen presenting cell that expresses such polypeptides, and T cells that are specific for cells expressing such polypeptides. The disclosed compositions are useful, for example, in the diagnosis, prevention and/or treatment of diseases, particularly pancreatic cancer. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 6 OF 9 USPATFULL on STN L52002:272801 USPATFULL ANCompositions and methods for the therapy and diagnosis of colon cancer TI Stolk, John A., Bothell, WA, UNITED STATES INXu, Jiangchun, Bellevue, WA, UNITED STATES Chenault, Ruth A., Seattle, WA, UNITED STATES Meagher, Madeleine Joy, Seattle, WA, UNITED STATES Corixa Corporation, Seattle, WA, UNITED STATES, 98104 (U.S. corporation) PA

PI US 2002150922 A1 20021017

AI US 2001-998598 A1 20011116 (9)
PRAI US 2001-304037P 20010710 (60)
US 2001-279670P 20010328 (60)
US 2001-267011P 20010206 (60)

US 2000-252222P 20001120 (60)

DT Utility FS APPLICATION

LREP SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300, SEATTLE, WA, 98104-7092

CLMN Number of Claims: 17 ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 9233

LN.CNT 25718

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Compositions and methods for the therapy and diagnosis of cancer, particularly colon cancer, are disclosed. Illustrative compositions comprise one or more colon tumor polypeptides, immunogenic portions thereof, polynucleotides that encode such polypeptides, antigen presenting cell that expresses such polypeptides, and T cells that are specific for cells expressing such polypeptides. The disclosed compositions are useful, for example, in the diagnosis, prevention and/or treatment of diseases, particularly colon cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 7 OF 9 USPATFULL on STN L5 AN2002:243051 USPATFULL Compositions and methods for the therapy and diagnosis of ovarian cancer TIINAlgate, Paul A., Issaquah, WA, UNITED STATES Jones, Robert, Seattle, WA, UNITED STATES Harlocker, Susan L., Seattle, WA, UNITED STATES Corixa Corporation, Seattle, WA, UNITED STATES, 98104 (U.S. corporation) PAUS 2002132237 PIA1 20020919 \mathtt{AI} US 2001-867701 A120010529 (9) PRAI 20000526 (60) US 2000-207484P DTUtility FS APPLICATION SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300, LREP SEATTLE, WA, 98104-7092 Number of Claims: 11 CLMNExemplary Claim: 1 ECL DRWN No Drawings

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Compositions and methods for the therapy and diagnosis of cancer, AB particularly ovarian cancer, are disclosed. Illustrative compositions comprise one or more ovarian tumor polypeptides, immunogenic portions thereof, polynucleotides that encode such polypeptides, antigen presenting cell that expresses such polypeptides, and T cells that are specific for cells expressing such polypeptides. The disclosed compositions are useful, for example, in the diagnosis, prevention and/or treatment of diseases, particularly ovarian cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5ANSWER 8 OF 9 USPATFULL on STN \mathbf{AN} 2002:191502 USPATFULL Method for comparing nucleic acid sequences TIFodor, Stephen P.A., Palo Alto, CA, UNITED STATES IN

Solas, Dennis W., San Francisco, CA, UNITED STATES Dower, William J., Menlo Park, CA, UNITED STATES

PΙ US 2002102567 Α1 20020801 US 6551784 B2 20030422 AIUS 2001-851312 A1 20010509 (9)

Continuation of Ser. No. US 1996-772376, filed on 23 Dec 1996, GRANTED, RLIPat. No. US 6309822 Continuation-in-part of Ser. No. US 1995-529115, filed on 15 Sep 1995, GRANTED, Pat. No. US 6040138 A 371 of International Ser. No. WO 1996-US14839, filed on 13 Sep 1996, UNKNOWN Division of Ser. No. US 1993-168904, filed on 15 Dec 1993, ABANDONED Continuation of Ser. No. US 1990-624114, filed on 6 Dec 1990, UNKNOWN Continuation-in-part of Ser. No. US 1989-362901, filed on 7 Jun 1989, UNKNOWN

Utility DTFS APPLICATION

Pillsbury Winthrop LLP, Intellectual Property Group, 1600 Tysons LREP Boulevard, McLean, VA, 22102

Number of Claims: 22 CLMN Exemplary Claim: 1 ECL12 Drawing Page(s) DRWN

LN.CNT 7077

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ABThe present invention provides methods for comparing and identifying differences in nucleic acid sequences using a plurality of sequence specific recognition reagents (i.e., probes comprising a nucleic acid complementary to a nucleic acid sequence in collections to be compared) bound to a solid surface.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 9 OF 9 USPATFULL on STN L52001:190900 USPATFULL AN

TIMethod for comparing copy number of nucleic acid sequences

Fodor, Stephen P. A., Palo Alto, CA, United States IN Solas, Dennis W., San Francisco, CA, United States Dower, William J., Menlo Park, CA, United States

Affymetrix, Inc., Santa Clara, CA, United States (U.S. corporation) PA

PIUS 6309822 B1 20011030

ΑI US 1996-772376 19961223 (8)

Continuation-in-part of Ser. No. US 1990-670118, filed on 25 Jun 1990, RLInow patented, Pat. No. US 5800992 Continuation-in-part of Ser. No. US 1999-529115, filed on 15 Sep 1999, now patented, Pat. No. US 6040138 Division of Ser. No. US 1993-168904, filed on 15 Dec 1993, now abandoned Continuation of Ser. No. US 1990-624114, filed on 6 Dec 1990, now abandoned Continuation-in-part of Ser. No. US 1989-362901, filed on 7 Jun 1989, now abandoned

WO 1996-US14839 PRAI 19960913

Utility DT

FS GRANTED

EXNAM Primary Examiner: Zitomer, Stephanie

LREP Pillsbury Winthrop LLP CLMN Number of Claims: 17 ECL Exemplary Claim: 1

DRWN 14 Drawing Figure(s); 12 Drawing Page(s)

LN.CNT 7686

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention provides methods for comparing and identifying differences in nucleic acid sequences using a plurality of sequence specific recognition reagents (i.e., probes comprising a nucleic acid complementary to a nucleic acid sequence in collections to be compared) bound to a solid surface.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d 15 9 kwic

L5 ANSWER 9 OF 9 USPATFULL on STN

DETD . . . than blotted arrays. Less target oligonucleotide is used to produce a given signal thereby dramatically improving the signal to noise ratio. Consequently the methods of this invention permit detection of only a few copies of a nucleic acid in extremely complex nucleic acid mixtures.

DETD . . . the probes of the high density array. The short RNA fragments are then separated from the long fragments (e.g., by electrophoresis), labeled if necessary as described above, and then are ready for hybridization with the high density probe array.

DETD . . . By testing the strength of interactions under various different conditions, the interaction of the promoter protein with each of the different potential binding sites may be analyzed. The spectrum of strength of interactions with each different potential binding site may provide significant insight into the types of features which are important in determining specificity.

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(FILE 'HOME' ENTERED AT 09:04:23 ON 26 OCT 2004) FILE 'BIOSIS, MEDLINE, CAPLUS, WPIDS, USPATFULL' ENTERED AT 09:05:26 ON 26 OCT 2004 154 S DETECT? (10A) RATIO? (10A) NUCLEIC ACID? L10 S L1 AND ELCTRO? (3A) LABEL? L228 S L1 AND ELECTRO? (4A) LABEL? L3L49 S L3 AND DIFFER? (5A) POTENTIAL? L5 9 DUP REM L4 (0 DUPLICATES REMOVED) => dup rem 13 PROCESSING COMPLETED FOR L3 28 DUP REM L3 (0 DUPLICATES REMOVED) L6 => s 16 an electroconductive MISSING OPERATOR L6 AN The search profile that was entered contains terms or nested terms that are not separated by a logical operator. => s 16 and electroconduc? 0 L6 AND ELECTROCONDUC? L7 => s 16 and electron? L820 L6 AND ELECTRON? => s 18 not 15 L9 11 L8 NOT L5 => d 19 bib abs 1-11 L9 ANSWER 1 OF 11 USPATFULL on STN 2004:215406 USPATFULL ANDetection of target molecules through interaction with probes TIPuskas, Robert Steven, Manchester, MO, UNITED STATES IN Singulex, Inc. (U.S. corporation) PAPΙ US 2004166514 **A**1 20040826 AΙ US 2003-720044 20031119 (10) Α1 PRAI 20021119 (60) US 2002-427233P US 2002-427234P 20021119 (60) US 2002-427232P 20021119 (60) DTUtility FS APPLICATION SONNENSCHEIN NATH & ROSENTHAL LLP, P.O. BOX 061080, WACKER DRIVE LREP STATION, SEARS TOWER, CHICAGO, IL, 60606-1080 Number of Claims: 57 CLMNExemplary Claim: 1 ECL DRWN -7 Drawing Page(s) LN.CNT 2134 CAS INDEXING IS AVAILABLE FOR THIS PATENT. A method for detecting a target nucleic acid molecule or target nucleic ABacid molecular complex comprising: (a) contacting two or more probes complementary to the molecule or molecular complex, said molecule or molecular complex being labeled with one or more fluorescent dye molecules of the same dye or labeled with two dyes that are indistinguishable by their emission characteristics in an assay instrument, wherein each probe interacts specifically with a different target nucleic acid sequence or a structure on the molecule or molecular complex; and (b) detecting interaction of the probes with the molecule or molecular complex, said interaction being detected by an increase in fluorescence intensity during a detection interval having a fluorescence

intensity above the fluorescence intensity of any individual free probe,

wherein molecule or molecular complex is analyzed such that only individual molecules or molecular complexes in contact with a probe are within an interrogation volume and within a detection time interval.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
L9
     ANSWER 2 OF 11 USPATFULL on STN
AN
       2004:76571 USPATFULL
TI
       Methods for identifying nucleotides at defined positions in target
       nucleic acids
       Van Ness, Jeffrey, Claremont, CA, UNITED STATES
IN
       Galas, David J., Claremong, CA, UNITED STATES
       Garrison, Lori K., Claremont, CA, UNITED STATES
PI
       US 2004058349
                          Αl
                               20040325
ΑI
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                               20030910 (10)
       US 2003-398004
       WO 2001-US30742
                               20011001
       Utility
DT
FS
       APPLICATION
       SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300,
LREP
       SEATTLE, WA, 98104-7092
       Number of Claims: 65
CLMN
       Exemplary Claim: 1
ECL
DRWN
       7 Drawing Page(s)
LN.CNT 2799
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
```

The identity of a nucleotide of interest in a target nucleic acid molecule is determined by combining the target with two primers, where the first primer hybridizes to and extends from a location 3' of the nucleotide of interest in the target, so as to incorporate the complement of the nucleotide of interest in a first extension product. The second primer then hybridizes to and extends based on the first extension product, at a location 3' of the complement of the nucleotide of interest, so as to incorporate the nucleotide of interest in a second extension product. The first primer then hybridizes to and extends from a location 3' of the nucleotide of interest in the second extension product, so as to form, in combination with the second extension product, a nucleic acid fragment. The first and second primers are designed to incorporate a portion of the recognition sequence of a restriction endonuclease that recognizes a partially variable interrupted base sequence. i.e. a sequence of the form A-B-C where A and C are a number and sequence of bases essential for RE recognition, and B is a number of bases essential for RE recognition. The first primer incorporates the sequence A, the second primer incorporates the sequence C, and they are designed, in view of the target, to product a nucleic acid fragment where sequences A and C are separated by the bases B, where the nucleotide of interest is within region B. Action of the RE on the nucleic acid fragment provides a small nucleic acid fragment that is amendable to characterization, to thereby reveal the identity of the nucleotide of interest.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L9
     ANSWER 3 OF 11 USPATFULL on STN
AN
       2004:25163 USPATFULL
       Methods for parallel measurement of genetic variations
TI
       Van Ness, Jeffrey, Claremont, CA, UNITED STATES
IN
       Galas, David J, Claremont, CA, UNITED STATES
       Garrison, Lori K, Claremont, CA, UNITED STATES
       US 2004019005
                               20040129
PI
                          A1
ΑI
                               20030703 (10)
       US 2003-398006
                          A1
       WO 2001-US42432
                               20011001
       Utility
DT
FS
       APPLICATION
       SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300,
LREP
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SEATTLE, WA, 98104-7092

CLMN Number of Claims: 159

ECL Exemplary Claim: 1
DRWN 24 Drawing Page(s)

LN.CNT 4262

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The identity of a nucleotide of interest in a target nucleic acid AB molecule is determined by combining the target with two primers. The first primer is immobilized to a substrate and hybridizes to and extends from a location 3' of the nucleotide of interest in the target, so as to incorporate the complement of the nucleotide of interest in a first extension product. The second primer then hybridizes to and extends based on the first extension product, which is immobilized to the substrate via the first primer, at a location 3' of the complement of the nucleotide of interest, so as to incorporate the nucleotide of interest in a second extension product. The second extension product then dissociates from the first extension product and thus from the substrate and re-hybridizes to another first primer molecule that has not extended. The non-extended first primer then extends from a location 3' of the nucleotide of interest in the second extension product, so as to form, in combination with the second extension product, a double-stranded nucleic acid fragment. The first and second primers are designed to incorporate a portion of the recognition sequence of a restriction endonuclease (RE) that recognizes a partially variable interrupted nucleotide sequence, i.e., a sequence of the form D-N-S where D and S refer to specific nucleotide sequences essential for RE recognition, and N is a sequence consisting of n viable nucleotides also required for RE recognition. The first primer incorporates the sequence D, the second primer incorporates the sequence S, and they are designed, in view of the target, to product a nucleic acid fragment where constant sequences D and S are separated by variable sequence N, where the nucleotide of interest is within region N. Action of the RE on the nucleic acid fragment provides a small nucleic acid fragment that is amendable to characterization, to thereby reveal the identity of the nucleotide of interest.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L9 ANSWER 4 OF 11 USPATFULL on STN
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AN 2003:93005 USPATFULL

TI Nucleic acid analysis techniques

Lockhart, David J., Santa Clara, CA, UNITED STATES
Chee, Mark, Palo Alto, CA, UNITED STATES
Gunderson, Kevin, Palo Alto, CA, UNITED STATES
Lai, Chaoqiang, Santa Clara, CA, UNITED STATES
Wodicka, Lisa, Santa Clara, CA, UNITED STATES
Cronin, Maureen T., Los Altos, CA, UNITED STATES
Lee, Danny H., San Jose, CA, UNITED STATES
Tran, Huu M., San Jose, CA, UNITED STATES
Matsuzaki, Hajime, Palo Alto, CA, UNITED STATES
McGall, Glenn H., Mt. View, CA, UNITED STATES
Barone, Anthony D., San Jose, CA, UNITED STATES

PI US 2003064364 A1 20030403

AI US 2002-880727 A1 20020411 (9)

RLI Continuation of Ser. No. US 1997-882649, filed on 25 Jun 1997, GRANTED, Pat. No. US 6344316 Continuation of Ser. No. WO 1997-US1603, filed on 22 Jan 1997, UNKNOWN

PRAI US 1996-10471P 19960123 (60) US 1997-35170P 19970109 (60)

DT Utility

FS APPLICATION

LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834

CLMN Number of Claims: 49

ECL Exemplary Claim: 1 DRWN 47 Drawing Page(s)

LN.CNT 6539

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention provides a simplified method for identifying ABdifferences in nucleic acid abundances (e.g., expression levels) between two or more samples. The methods involve providing an array containing a large number (e.g. greater than 1,000) of arbitrarily selected different oligonucleotide probes where the sequence and location of each different probe is known. Nucleic acid samples (e.g. mRNA) from two or more samples are hybridized to the probe arrays and the pattern of hybridization is detected. Differences in the hybridization patterns between the samples indicates differences in expression of various genes between those samples. This invention also provides a method of end-labeling a nucleic acid. In one embodiment, the method involves providing a nucleic acid, providing a labeled oligonucleotide and then enzymatically ligating the oligonucleotide to the nucleic acid. Thus, for example, where the nucleic acid is an RNA, a labeled oligoribonucleotide can be ligated using an RNA ligase. In another embodiment, the end labeling can be accomplished by providing a nucleic acid, providing labeled nucleoside triphosphates, and attaching the nucleoside triphosphates to the nucleic acid using a terminal transferase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 5 OF 11 USPATFULL on STN

AN 2003:79642 USPATFULL

TI Novel computation with nucleic acid molecules, computer and software for computing

IN Sakakibara, Yasubumi, Tokyo, JAPAN Morimoto, Nobuhiko, Hachioji-shi, JAPAN Suyama, Akira, Hachioji-shi, JAPAN

PA OLYMPUS OPTICAL CO., LTD., TOKYO, JAPAN (non-U.S. corporation)

PI US 2003055571 A1 20030320

AI US 2002-159475 A1 20020531 (10)

RLI Continuation-in-part of Ser. No. US 2001-893205, filed on 27 Jun 2001, PENDING

PRAI JP 2000-382449 20001215 JP 2000-399415 20001227

DT Utility

FS APPLICATION

LREP Scully, Scott, Murphy & Presser, 400 Garden City Plaza, Garden City, NY, 11530-0299

CLMN Number of Claims: 42 ECL Exemplary Claim: 1 DRWN 22 Drawing Page(s)

LN.CNT 3410

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention is to provide a molecular computer comprising an electronic operation section and a molecular operation section, wherein, in addition to general computation processing, said electronic operation section controls a function of the molecular operation section substantially, and the molecular operation is performed under control thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 6 OF 11 USPATFULL on STN

AN 2002:221319 USPATFULL

TI Novel computation with nucleic acid molecules, computer and software for computing

IN Suyama, Akira, Hachioji-shi, JAPAN Sakakibara, Yasubumi, Tokyo, JAPAN

```
OLYMPUS OPTICAL CO., LTD., TOKYO, JAPAN (non-U.S. corporation)
PA
PΙ
       US 2002119458
                          A1
                                20020829
AI
                                20010627 (9)
       US 2001-893205
                          A1
       JP 2000-382449
                           20001215
PRAI
       JP 2000-399415
                           20001227
       Utility
DT
FS
       APPLICATION
       Scully, Scott, Murphy & Presser, 400 Garden City Plaza, Garden City, NY,
LREP
       11530-0299
       Number of Claims: 24
CLMN
       Exemplary Claim: 1
\mathsf{ECL}
       14 Drawing Page(s)
DRWN
LN.CNT 2520
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention is to provide an information processing method
AB
       using an operational nucleic acid, which comprises (a) converting
       arbitrary information into a nucleic acid molecule, (b) hybridizing the
       nucleic acid molecule obtained in (a) to an operational nucleic acid
       designed so as to express a logical equation indicating a condition to
       be detected, and extending the nucleic acid molecule hybridized, and (c)
       detecting a binding profile of the nucleic acid molecule included in the
       nucleic acid molecule extended in (b), thereby evaluating whether a
       solution of the logical equation is true or false. The present invention
       further provides an apparatus and a program for performing the
       information processing method.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L9
     ANSWER 7 OF 11 USPATFULL on STN
AN
       2002:24160 USPATFULL
TI
       Nucleic acid analysis techniques
       Lockhart, David J., Santa Clara, CA, United States
IN
       Chee, Mark, Palo Alto, CA, United States
       Gunderson, Kevin, Palo Alto, CA, United States
       Chaoqiang, Lai, Santa Clara, CA, United States
       Wodicka, Lisa, Santa Clara, CA, United States
       Cronin, Maureen T., Los Altos, CA, United States
       Lee, Danny, San Jose, CA, United States
       Tran, Huu M., San Jose, CA, United States
       Matsuzaki, Hajime, Palo Alto, CA, United States
       Affymetrix, Inc., Santa Clara, CA, United States (U.S. corporation)
PA
PI
       US 6344316
                          B1
                                20020205
       US 1997-882649
                               19970625 (8)
ΑI
       Continuation of Ser. No. WO 1997-US1603, filed on 22 Jan 1997
\mathtt{RLI}
       US 1997-35170P
                           19970109 (60)
PRAI
       US 1996-10471P
                           19960123 (60)
       Utility
DT
FS
       GRANTED
       Primary Examiner: Houtteman, Scott W.
EXNAM
       Townsend and Townsend and Crew LLP
LREP
       Number of Claims: 28
CLMN
       Exemplary Claim: 1
ECL
       54 Drawing Figure(s); 47 Drawing Page(s)
DRWN
LN.CNT 6540
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention provides a simplified method for identifying
AB
       differences in nucleic acid abundances (e.g., expression levels) between
       two or more samples. The methods involve providing an array containing a
       large number (e.g. greater than 1,000) of arbitrarily selected different
       oligonucleotide probes where the sequence and location of each different
       probe is known. Nucleic acid samples (e.g. mRNA) from two or more
       samples are hybridized to the probe arrays and the pattern of
```

hybridization is detected. Differences in the hybridization patterns

Morimoto, Nobuhiko, Hachioji-shi, JAPAN

between the samples indicates differences in expression of various genes between those samples. This invention also provides a method of end-labeling a nucleic acid. In one embodiment, the method involves providing a nucleic acid, providing a labeled oligonucleotide and then enzymatically ligating the oligonucleotide to the nucleic acid. Thus, for example, where the nucleic acid is an RNA, a labeled oligoribonucleotide can be ligated using an RNA ligase. In another embodiment, the end labeling can be accomplished by providing a nucleic acid, providing labeled nucleoside triphosphates, and attaching the nucleoside triphosphates to the nucleic acid using a terminal transferase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 8 OF 11 USPATFULL on STN L9 2001:178820 USPATFULL AN TI Organic semiconductor recognition complex and system Kiel, Johnathan L., Universal City, TX, United States INBruno, John G., San Antonio, TX, United States Parker, Jill E., Floresville, TX, United States Alls, John L., San Antonio, TX, United States Batishko, Charles R., Richland, WA, United States Holwitt, Eric A., San Antonio, TX, United States Conceptual Mind Works, Inc., San Antonio, TX, United States (U.S. PA corporation) PIUS 6303316 B1 20011016 ΑI US 2000-608706 20000630 (9) PRAI US 1999-142301P 19990702 (60) US 2000-199620P 20000425 (60) Utility DTFS GRANTED EXNAM Primary Examiner: Horlick, Kenneth R. LREP Blakely, Sokoloff, Taylor & Zafman Number of Claims: 62 CLMN ECLExemplary Claim: 1 31 Drawing Figure(s); 15 Drawing Page(s) DRWN LN.CNT 3322

CAS INDEXING IS AVAILABLE FOR THIS PATENT. In a recognition complex system, nucleic acid ligands comprising random DNA sequences are operatively coupled to an organic semiconductor and distributed so as to form an array of recognition complexes. When an unknown chemical or biological analyte is applied to the array, the electrical and/or photochemical properties of one or more of the recognition complexes are altered upon binding of the nucleic acid ligand to the analyte. The degree to which the electrical and/or photochemical properties change is a function of the affinity of the nucleic acid ligand sequence for the analyte. The electrical and photochemical changes associated with the array, as a whole, can be used as a unique signature to identify the analyte. In certain embodiments, an iterative process of selection and amplification of nucleic acid ligands that bind to the analyte can be used to generate a new array with greater affinity and specificity for a target analyte, or to produce one or more nucleic acid ligands with high binding affinity for an analyte. The present invention also provides methods for preparing nucleic acid ligands that bind with high affinity to an analyte and using such nucleic acid ligands to neutralize the analyte.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB

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L9
     ANSWER 9 OF 11 USPATFULL on STN
AN
       1999:132581 USPATFULL
TI
       Gene detection method
       Hashimoto, Koji, Yokohama, Japan
IN
       Ito, Keiko, Kawasaki, Japan
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```
Ishimori, Yoshio, Tokyo, Japan
       Kabushiki Kaisha Toshiba, Kawasaki, Japan (non-U.S. corporation)
PA
PI
       US 5972692 .
                                19991026
AΙ
       US 1997-886161
                               19970630 (8)
RLI
       Division of Ser. No. US 1993-167113, filed on 16 Dec 1993, now patented,
       Pat. No. US 5776672 which is a continuation-in-part of Ser. No. US
       1991-766064, filed on 27 Sep 1991, now abandoned
       JP 1990-259011
PRAI
                           19900928
       JP 1991-90879
                           19910422
       JP 1991-191868
                           19910731
       Utility
DT
FS
       Granted
       Primary Examiner: Campbell, Eggerton A.
EXNAM
       Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
LREP
       Number of Claims: 7
CLMN
ECL
       Exemplary Claim: 1
       10 Drawing Figure(s); 5 Drawing Page(s)
DRWN
LN.CNT 3248
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       A single stranded nucleic acid probe having a base sequence
       complementary to the gene to be detected is immobilized onto the surface
       of an electrode or the tip of an optical fiber, and the nucleic probe is
       reacted with the gene sample denatured to a single stranded form, and
       then the nucleic acid probe hybridized with the gene is detected. In
       this procedure, to the reaction system consisting of the nucleic acid
       probe and the gene sample, a double stranded nucleic acid recognizing
       substance capable of binding specifically to the double stranded nucleic
       acid and being active electrochemically or optically is added. The
       detection of the nucleic acid probe is conducted by electrochemical or
       optical determination utilizing the electrode or optical fiber mentioned
       above. By this method, safer and more convenient detection of the gene
       is possible at a higher sensitivity even in a reduced time period.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L9
     ANSWER 10 OF 11 USPATFULL on STN
AN
       1998:78923 USPATFULL
TI
       Gene detection method
       Hashimoto, Koji, Yokohama, Japan
IN
       Ito, Keiko, Kawasaki, Japan
       Ishimori, Yoshio, Tokyo, Japan .
       Gotoh, Masanori, Tokyo, Japan
       Kabushiki Kaisha Toshiba, Kawasaki, Japan (non-U.S. corporation)
PA
PI
       US 5776672
                               19980707
ΑI
       US 1993-167113
                               19931216 (8)
       Continuation-in-part of Ser. No. US 1991-766064, filed on 27 Sep 1991
RLI
       JP 1990-259011
PRAI
                           19900928
       JP 1991-90879
                           19910422
       JP 1991-191868
                           19910731
       Utility
DT
       Granted
FS
       Primary Examiner: Campbell, Eggerton A.
EXNAM
LREP
       Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
CLMN
       Number of Claims: 9
ECL
       Exemplary Claim: 1
       10 Drawing Figure(s); 5 Drawing Page(s)
DRWN
LN.CNT 3246
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A single stranded nucleic acid probe having a base sequence
AB
       complementary to the gene to be detected is immobilized onto the surface
       of an electrode or the tip of an optical fiber, and the nucleic probe is
       reacted with the gene sample denatured to a single stranded form, and
       then the nucleic acid probe hybridized with the gene is detected. In
       this procedure, to the reaction system consisting of the nucleic acid
```

probe and the gene sample, a double stranded nucleic acid recognizing substance capable of binding specifically to the double stranded nucleic acid and being active electrochemically or optically is added. The detection of the nucleic acid probe is conducted by electrochemical or optical determination utilizing the electrode or optical fiber mentioned above. By this method, safer and more convenient detection of the gene is possible at a higher sensitivity even in a reduced time period.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
L9
     ANSWER 11 OF 11 USPATFULL on STN
       1998:30859 USPATFULL
AN
       Adduct protection assay
TI
       Becker, Michael, San Diego, CA, United States
IN
       Nelson, Norman C., San Diego, CA, United States
       Gen-Probe Incorporated, San Diego, CA, United States (U.S. corporation)
PA
       US 5731148
PI
                               19980324
       US 1995-478221
                               19950607 (8)
AΙ
       Utility
DT
       Granted
FS
      Primary Examiner: Jones, W. Gary; Assistant Examiner: Atzel, Amy
EXNAM
       Lyon & Lyon LLP
LREP
       Number of Claims: 36
CLMN
       Exemplary Claim: 1
ECL
       5 Drawing Figure(s); 4 Drawing Page(s)
DRWN
LN.CNT 1534
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

The present invention features an adduct protection assay involving the use of a labelled binding partner and a signal altering ligand. The signal altering ligand can preferentially alter the ability of label which is not part of a binding partner: analyte complex to produce a detectable signal, compared to its ability to alter signal produced from label which is part of a binding partner: analyte complex. The presence or amount of analyte can be determined by detecting the signal produced from unaltered label. The adduct protection assay is very versatile. For example, alteration of signal can be carried out under a wide range of conditions (e.g., pH, temperature, and ionic strength), and both label alteration and signal triggering can be carried out at essentially constant temperature to achieve a high degree of sensitivity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
=> s electroconductive label?
            19 ELECTROCONDUCTIVE LABEL?
L10
=> s 110 and nucleic acid?
   3 FILES SEARCHED...
            14 L10 AND NUCLEIC ACID?
L11
=>
=> dup rem l11
PROCESSING COMPLETED FOR L11
L12
             14 DUP REM L11 (0 DUPLICATES REMOVED)
=> s l12 and ratio?
L13
             3 L12 AND RATIO?
=> d 113 bib abs 1-3
     ANSWER 1 OF 3
                   USPATFULL on STN
L13
       2002:148576
                   USPATFULL
AN
      Method for detecting nucleic acids
TI
      Makino, Yoshihiko, Saitama, JAPAN
IN
       Abe, Yoshihiko, Saitama, JAPAN
       Ogawa, Masashi, Tokyo, JAPAN
       Takagi, Makoto, Fukuoka, JAPAN
       Takenaka, Shigeori, Fukuoka, JAPAN
       Yamashita, Kenichi, Fukuoka, JAPAN
       US 2002076717
PI
                          A1
                               20020620
                               20010622 (9)
AI
       US 2001-887625
                          Α1
PRAI
       JP 2000-187486
                           20000622
      Utility
DT
FS
       APPLICATION
LREP
      REED SMITH LLP, 375 Park Avenue, New York, NY, 10152
      Number of Claims: 8
CLMN
       Exemplary Claim: 1
ECL
       3 Drawing Page(s)
DRWN
LN.CNT 552
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A method of detecting nucleic acid fragments in
AB
       plural samples is performed by the steps of: attaching an
       electroconductive label to nucleic
       acid fragments in one sample and attaching a different
       electroconductive label to nucleic
       acid fragments in another sample; preparing a mixture of these
       samples; spotting the mixture on an electroconductive microarray having
      plural electrodes onto which probe molecules complementary to the
      nucleic acid fragments are fixed, so that
       hybridization between the nucleic acid fragments and
       the probe molecules on the electroconductive microarray can proceed to
       form hybrid structures; applying to the electrode an electric potential
       corresponding to the oxidation-reduction potential of the former label
       and detecting on the electrode an electric current; applying to the
       electrode an electric potential corresponding to the oxidation-reduction
       potential of the latter label and detecting on the electrode an electric
       current; and comparing the electric current detected in the former
       detecting procedure and that detected in the latter detecting procedure.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

L13

AN

TI

IN

ANSWER 2 OF 3 USPATFULL on STN

Iwaki, Yoshihide, Saitama, JAPAN

Makino, Yoshihiko, Saitama, JAPAN

Fixation of nucleotide derivatives to solid carrier

2002:72605 USPATFULL

Shinoki, Hiroshi, Saitama, JAPAN Kuhara, Satoru, Fukuoka, JAPAN Tashiro, Kosuke, Fukuoka, JAPAN Muta, Shigeru, Fukuoka, JAPAN PIUS 2002039742 A1 20020404 20010809 (9) AΙ US 2001-927697 A1 PRAI JP 2000-241773 20000809 JP 2001-161199 20010529 Utility DTAPPLICATION FS REED SMITH LLP, 375 PARK AVENUE, NEW YORK, NY, 10152 LREP Number of Claims: 16 CLMN Exemplary Claim: 1 ECL2 Drawing Page(s) DRWN LN.CNT 890 CAS INDEXING IS AVAILABLE FOR THIS PATENT. A micro-array for analysis of DNA is prepared by the steps of spotting AB onto a solid carrier in its predetermined area in which plural reactive groups are fixed an aqueous solution which contains a thickening agent and probe molecules (e.g., DNA fragments) having a group reactive with the reactive group of the solid carrier to produce covalent bonding; spotting onto the solid carrier in a different area having the same reactive groups an aqueous solution (same or different); incubating the aqueous solution-spotted solid carrier to produce the covalent bondings; and washing the solid carrier with an aqueous medium to remove the thickening agent from the solid carrier. An electrostatic bonding can be utilized in place of the covalent bonding. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 3 OF 3 USPATFULL on STN L13 AN 2001:233294 USPATFULL DNA chip and reactive electrode TI Makino, Yoshihiko, Saitama, Japan INAbe, Yoshihiko, Saitama, Japan Ogawa, Masashi, Tokyo, Japan Fuji Photo Film Co., Ltd. (non-U.S. corporation) PAPIUS 2001053522 A1 20011220 US 2001-845403 **A**1 20010430 (9) AΙ 20000428 PRAI JP 2000-130090 DTUtility FS APPLICATION Jules Goldberg, Jules E. Goldberg, Esq., REED SMITH LLP, 375 Park LREP Avenue, New York, NY, 10152

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A nucleic acid detective means composed of an electrode and plural peptide nucleic acids which are fixed onto the electrode via covalent bonding is favorably employed for electrochemically detecting complementary DNA fragments The covalent bonding between the electrode and the peptide nucleic acids are favorably produced by the reaction between a reactive hydrogen-containing group attached to the peptide nucleic acid and a vinylsulfonyl group or a reactive precursor thereof attached to the electrode.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Number of Claims: 33

Exemplary Claim: 1

2 Drawing Page(s)

CLMN

DRWN

ECL